

REMARKS

Reconsideration and allowance of the subject application are respectfully requested. Claims 1-21 remain pending, claims 1 and 12 being independent.

Allowable Subject Matter

Applicant appreciates the Examiner's indication on page 8 of the Office Action that claims 14-15 and 19-21 would be allowable if rewritten in independent form to include the limitations of their respective base claim and any intervening claims. For at least the reasons set forth below, Applicant respectfully submits that all pending claims should be indicated as allowable.

Objection to Specification

In reply to the objection to the specification set forth on page 2 of the Office Action, based on a typographical error, Applicant has made the appropriate correction and, thus, respectfully requests that the objection to the specification be withdrawn. Applicant has made other amendments to the specification to address minor informalities.

Claim Objection

In reply to the claim objection set forth on page 2 of the Office Action, based on the phrase in claim 6 reading "from groups," Applicant has amended this phrase to read --form groups-- as suggested by the Examiner. Accordingly, Applicant respectfully requests that the objection to the claims be withdrawn. Applicant has made other claim amendments to address minor informalities.

Rejection Under 35 U.S.C. § 112, Second Paragraph

Claims 6 and 7 stand rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant

regards as the invention. This rejection, insofar as it pertains to the presently pending claims, is respectfully traversed.

In reply to the Examiner's indication that the phrase "said predetermined region" in claim 6 lacks proper antecedent basis, Applicant has amended claim 6 to depend from claim 5, resulting in proper antecedent basis for the term "said predetermined region." In view of this amendment, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejection under 35 U.S.C. § 112, second paragraph.

Prior Art Rejections

Claims 1-4, 6-8, 12, 13, 17, and 18 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over *Yamada* (JP 10-136391) in view of *Ueno* (U.S. Pub. No. 2001/0043276) and further in view of *Umeda et al.* (U.S. Patent 6,452,632). Claims 5, 9-11, and 16 stand rejected under 35 U.S.C. § 103 as being unpatentable over *Yamada* in view of *Ueno*, *Umeda*, and further in view of *Suga et al.* (U.S. Patent 5,363,137). These rejections, insofar as they pertain to the presently pending claims, are respectfully traversed.

Independent claim 1 is directed to a solid-state image pickup apparatus that includes a plurality of photosensitive cells for performing a photoelectric conversion for incident light, such cells being arranged two-dimensionally in a photosensitive array for receiving the incident light. The photosensitive cells are arranged obliquely adjacent to each other at positions shifted from each other by a length in row and column directions that is substantially equal to half of a pitch at which the photosensitive cells are disposed in the row and column directions. An image signal output from an image pickup section for transferring signal charge obtained by photoelectric conversion by each of

the photosensitive cells in response to a drive signal at a predetermined timing is converted to a digital signal and a picture signal is generated by performing signal processing on the digital signal.

As amended, independent claim 1 specifies that the image pickup section comprises: a color separator having color filters for separating the incident light into at least three separated colors, color filters of at least one of the separated colors being arranged in the column direction; a signal reading out section for transferring the signal charge only to a plurality of transfer devices each arranged in the column direction associated with one of the photosensitive cells; a plurality of vertical transferring registers for vertically transferring the signal charge read out from the signal reading out section; and a horizontal transferring register for horizontally transferring the signal charge supplied from each of the vertical transferring registers. Claim 1 further specifies that the image pickup apparatus comprises: a mode setting section for setting either a whole-pixel reading out mode of reading out signal charge from all of the photosensitive cells or a specifying reading out mode of reading out only signal charge of the at least one separated color; a drive signal generator for generating the drive signal in response to an instruction of the mode setting section, and selectively supplying the drive signal generated in accordance with the mode set; and a control section for controlling a generation of the drive signal by the drive signal generator in accordance with the mode set by the mode setting section, and controlling a signal processing for the picture signal.

The primary reference, *Yamada*, discloses an image pickup device having a plurality of photosensors arranged bi-dimensionally. Fig. 3 of *Yamada* illustrates columns of green photosensors 53c, and Fig. 8 shows an arrangement of transfer electrodes 39a-42a. With reference to Fig. 7 and col. 9, lines 16-28, the shape of each color is an equilateral hexagon and the distances between the centers of adjacent filters are set generally the same. Fig. 6 shows a G-lattice, RB-checker pattern of

color filter segments, and Fig. 7 shows a color filter having primary-color segments R, G, and B arranged into vertical stripes with respect to the same color.

On page 4 of the Office Action, the Examiner acknowledges that *Yamada* fails to disclose the mode setting, drive signal generating, and control for generating drive signals specified in independent claim 1. In an attempt to make up for these deficiencies, the Examiner relies on the secondary references of *Ueno* and *Umeda* to reject independent claim 1, and in particular relies on *Umeda* as allegedly suggesting a modification of *Yamada* in which only the signal charge of at least one separated color is read out. Applicant respectfully submits that this grounds of rejection fails to establish *prima facie* obviousness of independent claim 1, or any claim depending therefrom, for at least the following reasons.

Importantly, although cited portions of *Umeda* refer to a sub-sampling scheme which selectively outputs only green pixels, it is important to note that, as mentioned at col. 9, lines 19-20, the sensor section 102 of *Umeda* is a CMOS type image sensor, adapted to develop green pixel signals in the form of a block of 8x8 pixels. Thus, this secondary reference fails to teach or suggest a driving technique in a CCD-type imaging device (i.e., the type of imaging device detailed in claim 1) to generate an isolated color signal in the manner specified in claim 1. Consequently, Applicant respectfully submits that the Examiner's reliance on *Umeda* fails to suggest a modification of *Yamada* that satisfies the features of claim 1. Thus, the asserted grounds of rejection fails to establish *prima facie* obviousness of claim 1, or any claim depending therefrom.

Independent method claim 12 is believed to define over the asserted combination of references based on similar reasoning to that set forth above with respect to claim 1. Consequently, Applicant submits that the asserted grounds of rejection fails to establish *prima facie* obviousness of claim 12, or any claim depending therefrom.

The Examiner's reliance on the additional reference to *Suga*, related to certain dependent claims, fails to make up for the deficiencies of the asserted combination of *Yamada*, *Ueno*, and *Umeda*.

In view of the above, Applicant respectfully requests reconsideration and withdrawal of the Examiner's rejections under 35 U.S.C. § 103.

Conclusion

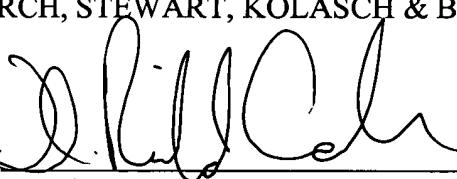
Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the undersigned at the telephone number below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

Applicant respectfully petitions for a one (1) month extension of time pursuant to 37 C.F.R. §§ 1.17 and 1.136(a). A check in the amount of \$110.00 in payment of the extension of time fee is attached.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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